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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,671	02/01/2005	Pierre Charlat	Serie 5946	6797

7590 08/21/2009

Air Liquide
Intellectual Property Department
2700 Post Oak Blvd
Suite 1800
Houston, TX 77056

EXAMINER	
ONEILL, KARIE AMBER	
ART UNIT	PAPER NUMBER
1795	

MAIL DATE	DELIVERY MODE
08/21/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/523,671	CHARLAT ET AL.	
	Examiner	Art Unit	
	Karie O'Neill	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 May 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23-28 and 31-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23-28 and 31-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 February 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The Applicant's amendment filed on May 15, 2009, was received. Claims 23, 28, 31 and 32 have been amended. Claims 1-22 and 29-30 have been cancelled. Therefore, Claims 23-28 and 31-37 are pending in this office action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear how the second valve element is located in the first hollow body. For purposes of compact prosecution, Examiner is interpreting "second valve element spring" to be "first valve element spring".

Claim Rejections - 35 USC § 102

4. The rejection of Claims 17-32 and 37 under 35 U.S.C. 102(e) as being anticipated by Petillo et al. (US 6,544,679 B1), have been overcome based on the amendments to the claims.

Claim Rejections - 35 USC § 103

5. The rejection of Claims 33-36 under 35 U.S.C. 103(a) as being unpatentable over Petillo et al. (US 6,544,679 B1), in view of Avis et al. (US 2002/0189679 A1), is overcome based on the amendments to the claims.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 23-28, and 31-37 rejected under 35 U.S.C. 103(a) as being unpatentable over Petillo et al. (US 6,544,679 B1) in view of Lebzelter (US 3,921,665).

With regard to Claim 23, Petillo et al. discloses an apparatus, said apparatus comprising:

a) at least one fuel cell pack, called an electrochemical cell assembly, wherein said fuel cell pack comprises:

(1) a plurality of elementary cells (100); and

(2) a fluid distribution means, multiple fluid interface nipples (104, 106, 108, 110), wherein:

(i) said fluid distribution means, multiple fluid interface nipples (104, 106, 108, 110), supplies each said elementary cell (100) with two input fluids, and allows for the discharge of two output fluids from said elementary cells (column 4 lines 54-57 and column 5 lines 25-31);

(ii) said fluid distribution means, multiple fluid interface nipples (104, 106, 108, 110), is able to be connected to a fluid distribution system, called a support manifold (102); and

(iii) said fluid distribution means, multiple fluid interface nipples (104, 106, 108, 110), comprises at least one series of first valve elements (302,701), wherein said first valve elements (302,701) are located on a first side of said fuel cell pack, either interposed in the fluid path in the manifold (102) or in the inlet and outlet conduits of the cell assembly, or both (column 5 lines 43-53 and Figure 3);

(b) said fluid distribution system, or support manifold (102), wherein:

(1) said fluid distribution system (102) is able to supply each said fuel cell pack (100) with said input fluids, and allows for the discharge of at least two said output fluids from each said fuel cell pack (100) (column 5 lines 8-42 and Figures 2 and 3); and

(2) said fluid distribution system (102) is able to be connected to at least one external circuit, at least one source fluid reservoir and at least one pump, for the supply of said input fluids (column 3 lines 42-45), and to at least one external circuit, a return reservoir, for the discharge of said output fluids (column 3 lines 49-51); and

(c) at least one series of second valve elements (302,701) (column 5 lines 43-53 and Figure 3).

Petillo et al. does not disclose wherein each of said first valve elements comprises a peripheral ring disposed on a moving stem that is urged by a spring against a valve seat; each of said second valve elements comprises a peripheral ring disposed on a moving stem that is urged by a spring against a valve seat; and each one of said first valve elements corresponds to a respective one of said second valve elements such that when they are urged against one another the stem of the said one of said first valve elements abuts the stem of said respective one of said second valve elements to urge open each of said one of said first valve elements and said respective one of said second valve elements.

Lebzelter discloses in Figures 4 and 5, a first valve element (19) comprising a first cylindrical land (21) and a peripheral ring (39) disposed on a moving stem (23) that is urged by a spring (31) against a valve seat (19); said second valve elements (19) comprising cylindrical land (20) and a peripheral ring (85) disposed on a moving poppet stem (81) that is urged by a spring (87) against a valve seat (19); and each one of said first valve elements (19, 21) corresponds to a respective one of said second valve elements (19, 20) such that when they are urged against one another the stem (23) of the said one of said first valve elements abuts the stem (81) of said respective one of said second valve elements to urge open each of said one of said first valve elements and said respective one of said second valve elements (columns 2 and 3). It would have been obvious at the time of the invention to use a first and second valve elements having a peripheral ring disposed on a moving stem that is urged by a spring against a valve seat in the apparatus of Petillo et al., because Lebzelter teaches using a fluid limit

valve with a unique means for producing a signal when the valve is being operated in such a way that it will be put in jeopardy of physical damage to the apparatus (column 1 lines 21-24).

The phrase, "which may be used as a power-producing device based upon a fuel cell" is functional language and imparts intended use to the structural features of the claim. Therefore, while the intended use language of the claim has been considered, it is not given patentable weight because it is directed to a process and not directed to the structural features of the product. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. See MPEP 2111. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. See MPEP 2113.

With regard to Claims 24-27, Petillo et al. discloses in Figures 1-3, wherein said fluid distribution system (102) further comprises a support member, or a plate, wherein said support member comprises: at least one fluid input member (104, 110) and at least one fluid output member (106, 108), wherein said support member is a plate preferably formed of an electrically insulating material, and wherein said support member further comprises integrated channels to allow fluids to circulate (column 5 lines 8-24). The phrase, "formed by injection molding or compression molding" is a product-by-process limitation. Product-by-process claims are not limited to the manipulations of the recited

steps, only the structure implied by the steps. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698,227 USPQ 964, 966 (Fed. Cir. 1985). Since the support member of Petillo et al. is the same as that of the Applicant's, Applicant's process is not given patentable weight in this claim.

With regard to Claim 28, Petillo et al. discloses in Figures 3 and 7, wherein said fluid distribution system, or support manifold (102), comprises said series of second valve elements (302, 701) and each said series of second valve elements (302,701) is able to substantially cooperate with a corresponding said series of first valve elements (302,701) (column 5 lines 43-53 and column 8 lines 37-54).

With regard to Claims 31-36, Lebzelter discloses in Figure 5 and column 3, wherein: a) each said second valve element (19,20) comprises a second hollow body, called a poppet cylinder (65); and b) said second hollow body (65) contains both of said second valve element stem (81) and said second valve element spring (87). Lebzelter discloses in Figure 4, wherein: a) each of said first valve element (19,21) comprises a first hollow body, called a stem bore (7); and b) said fist hollow body (7) contains both of said first valve element stem (23) and said first valve element spring (31). Lebzelter discloses wherein a free end of said first hollow body (7) which comprises one end of the valve element (19) is able to fit into the corresponding second hollow body (65)

which comprises the other end of the valve element (19), and vice versa. Lebzelter also discloses wherein a sealing element (75) is located between said first hollow body (7) and said second corresponding hollow body (65). It would have been obvious to have first and second valve elements comprise hollow bodies in which of the free end of the first/second hollow body fits into the hollow body of the corresponding first/second hollow body in the apparatus of Petillo et al., because Lebzelter teaches creating a better seal between the valve elements so as to prevent fluid leaking around the exterior of the valve members (column 3, lines 34-38).

With regard to Claim 37, Petillo et al. discloses a support manifold (102) made from an electrically insulting material and comprising multiple fluid interface nipples (104, 106, 108, 110), and at least one series of first valve elements (302, 701), wherein said first valve elements (302,701) are located on a first side of said fuel cell pack, either interposed in the fluid path in the manifold (102) or in the inlet and outlet conduits of the cell assembly, or both (column 5 lines 43-53 and Figure 3). The phrase, "a substantial portion of a component is formed by injection molding or compression molding" is a product-by-process limitation. Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is

unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698,227 USPQ 964, 966 (Fed. Cir. 1985).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karie O'Neill whose telephone number is (571)272-8614. The examiner can normally be reached on Monday through Friday from 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PATRICK RYAN/
Supervisory Patent Examiner, Art Unit 1795

Karie O'Neill
Examiner
Art Unit 1795

KAO